

# Tim Schoof PhD

HEARING AND DATA SCIENTIST

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## Education

<b>PhD</b>	Speech, Hearing and Phonetic Sciences	University College London, UK	2014
<b>MRes</b>	Speech, Language and Cognition	University College London, UK	2011
<b>MA</b>	Linguistics	Utrecht University, The Netherlands	2010
<b>BA</b>	English Language and Literature	University of Groningen, The Netherlands	2007

## Experience

### Research Scientist II

*Starkey Hearing Technologies*

Goal: Impact future hearing aid technology

*Nov 2019 - present*

- Design, conduct, and analyze experiments in hearing and healthables

### Research Associate

*University College London, UK*

Project: Investigating the consequences of cochlear neuropathy in people with normal hearing thresholds

*Jan 2017 - Sep 2019*

- Designed, calibrated, and conducted speech perception and psychoacoustic tests and measured OAEs and EEG responses in noise-exposed middle-aged adults
- Developed reproducible workflows using MATLAB, R, and the version control system git for data collection and analysis

### Postdoctoral Fellow

*Northwestern University, USA*

Project: Examined individual differences in hearing aid outcomes

*May 2015 - Dec 2016*

- Collaborated on a multi-site clinical hearing aid trial in a team of researchers and audiologists
- Conducted speech perception, listening effort, and psychoacoustic tests on older hearing-impaired individuals
- Analyzed data from the multi-site hearing aid trial and other experiments
- Communicated the results of hearing science studies via peer-reviewed publications and conference presentations

### Pauline Ashley Postdoctoral Fellow

*University College London, UK*

Project: Developed a rapid clinical assessment tool of subcortical auditory processing

*Oct 2014 - Apr 2015*

- Developed a novel test paradigm for the rapid acquisition of scalp-recorded brainstem responses
- Analyzed EEG data using signal processing and statistical analysis techniques such as bootstrapping

## Skills

- **Clinical techniques:** audiometry, tympanometry, hearing aid fitting using real-ear probe-microphone measurements, verification of hearing aid performance, taking earmold impressions
- **Experimental techniques:** speech perception and psychoacoustic task design and measurement, OAE measurement, EEG measurement and analysis
- **Data analysis and programming:** signal processing, statistical analysis, MATLAB, R, version control with git
- **Other:** Participant recruitment, writing and managing project plans

## Organizational and service experience

### Editorial board member

Journal of Speech, Language, and Hearing Research

*2018 - 2020*

- Peer-review 8-10 manuscripts a year

### Professional development facilitator

UCL Neuroscience Careers Network

*2018*

- Co-organized an open science workshop with speakers from a leading funding agency and a high-impact journal
- Co-organized an interview skills workshop for early career researchers

### Course coordinator and instructor

*University College London, UK*

Current issues in production, perception and neural processing of speech (MSc)

*2017*

- Developed course content, invited guest lecturers, set essay questions, taught lectures, marked coursework

- Organized a new conference within the field of auditory neuroscience
- Invited speakers, set the conference program, secured venue and catering, handled reimbursements
- Secured over £13,000 in funding through grant applications and corporate sponsorship

## Publications

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1. Calcutt, A., Schoof, T., Rosen, S., Shinn-Cunningham, B., and Souza, P. (2020). Switching streams across ears to evaluate informational masking of speech-on-speech. *Ear and Hearing*, 41(1):208–216
2. Souza, P., Arehart, K., Schoof, T., Anderson, M., Strori, D., and Balmert, L. (2019). Understanding variability in individual response to hearing aid signal processing: Results from a clinical trial. *Ear and Hearing*, 40(6):1280–1292
3. Mai, G., Schoof, T., and Howell, P. (2019). Modulation of phase-locked neural responses to speech during different arousal states is age-dependent. *NeuroImage*, 189:734–744
4. Schoof, T. and Souza, P. (preprint). Multitasking with typical use of hearing aid noise reduction in older listeners. *PsyArXiv*, <https://doi.org/10.31234/osf.io/bhq2j>
5. Anderson, M., Rallapalli, V., Schoof, T., Souza, P., and Arehart, K. (2018). The use of self-report measures to examine changes in perception in response to fittings using different signal processing parameters. *International Journal of Audiology*, 57(11):809–815
6. Souza, P., Schoof, T., and Shen, J. (2017). Can individual cognitive abilities direct audiology treatment? *Audiology Today*, 29(2):25–34
7. Schoof, T. and Rosen, S. (2016). The role of age-related declines in subcortical auditory processing in speech perception in noise. *Journal of the Association for Research in Otolaryngology*, 17(5):441–460
8. Schoof, T. and Rosen, S. (2015). High sentence predictability increases the fluctuating masker benefit. *Journal of the Acoustical Society of America*, 138(3):EL181–EL186
9. Schoof, T. and Rosen, S. (2014). The role of auditory and cognitive factors in understanding speech in noise by normal-hearing older listeners. *Frontiers in Aging Neuroscience*, 6:307
10. Schoof, T., Green, T., Faulkner, A., and Rosen, S. (2013). Advantages from bilateral hearing in speech perception in noise with simulated cochlear implants and residual acoustic hearing. *Journal of the Acoustical Society of America*, 133(2):1017–1030